

PRELIMINARY AMENDMENT  
Attorney Docket Q62126

Page 4, after line 14, insert the heading Detailed Description of the Invention.

IN THE CLAIMS:

Please enter the following amended claims:

- AT 90 C
4. (Amended) A method according to claim 1, characterized in that each generated pulse is provided with a given amplification (48) or attenuation and the received pulses are provided with the corresponding attenuation (50) or amplification.
5. (Amended) A method according to claim 1, characterized in that the signals received are subjected to a synchronous averaging (52).
6. (Amended) A method according to claim 1, characterized in that the received signals are subjected to a matched filtering (54).
7. (Amended) A method according to claim 1, characterized in that the received signals are subjected, at least for the medium and high frequency pulses, to a noise suppressing step (56) comprising the estimation of the noise for the part of the received signal after the channel end echo and the determination of a threshold above which the signals are taken into consideration.
8. (Amended) A method according to claim 1, characterized in that the received signals are processed in their own frequency bands and added (60) after processing.
10. (Amended) A method according to claim 1, characterized in that the pulses are complex analytical pulses.

PRELIMINARY AMENDMENT

Attorney Docket Q62126

- AS Cont*
11. (Amended) A method according to claim 1, characterized in that the frequency bandwidth and the amplitude of the low frequency pulses (40) are selected according to the channel attenuation and its compliancy in terms of egress.
12. (Amended) A method according to claim 1 characterized in that the pulses are generated sequentially or simultaneously.
13. (Amended) A method according to claim 1 wherein at least one of said properties being determined comprises the locations of defects of the channel.
14. (Amended) A method according to claim 1 wherein said transmission channel comprises a telephone line between a central office (12) and a subscriber (14), the measurement being made at the central office.
- Subj B*  
*4110*
15. (Amended) A method for testing the properties of telephone lines comprising copper pairs, between a central office and a subscriber, characterized in that it comprises using time domain reflectometry to test said properties.
- Subj C*  
*4110*
16. (Amended) A method according to claim 15, characterized in that the time domain reflectometry step comprises the steps of generating, at one end of the channel, a plurality of pulses (40, 42, 44) covering different frequency bands, and detecting echoes provided by these pulses at the same end (12) of the line.
- Subj D*  
*4110*
17. (Amended) An apparatus for testing the properties of telephone lines comprising copper pairs, between a central office and a subscriber, characterized in that it comprises time domain reflectometry test circuit.

PRELIMINARY AMENDMENT

Attorney Docket Q62126

*R&C  
Cont*

18. (Amended) An apparatus according to claim 17, characterized in that said time reflectometry test circuit comprises a pulse generator generating a plurality of pulses at one end of the line covering different frequency bands, and an echo processor processing the echoes provided by these pulses at the same end (12) of the channel.

19. (Amended) An apparatus according to claim 18, characterized in that the different frequency bands are overlapping.

20. (Amended) An apparatus according to claim 19, characterized in that said echo processor processes the reflected pulses such that the frequency spectrum is practically flat after reflection and processing.

21. (Amended) An apparatus according to claim 18, characterized in that the pulse generator includes, amplification or attenuation for each generated pulse and in that said apparatus includes complementary attenuation or amplification for each received pulse.

22. (Amended) An apparatus according to claim 18, characterized in that it comprises a synchronous averager for the received signals.

23. (Amended) An apparatus according to claim 18, characterized in that it comprises a matched filter for the received signals.

24. (Amended) An apparatus according to claim 18, characterized in that it comprises a noise suppressor for the received signals, the noise including an estimator estimating the noise for part of the received signals after the channel end echo and threshold circuit determining a threshold above which the signals are taken into consideration.

PRELIMINARY AMENDMENT

Attorney Docket Q62126

*AB  
CWT*

25. (Amended) An apparatus according to claim 18, characterized in that it comprises a processor processing the received signals for each frequency band and an adder adding the processed signals.

26. (Amended) An apparatus according to claim 25, characterized in that it comprises a detector detecting the modulus of the received signals and/or the variation with time of the frequency of the received signals.

27. (Amended) An apparatus according to claim 18, characterized in that it comprises a receiver receiving complex analytical pulses.

28. (Amended) An apparatus according to claim 18, characterized in that it comprises a selector selecting the frequency bandwidth and the amplitude of the low frequency pulses according to the line attenuation and its compliancy in terms of egress.

29. (Amended) An apparatus according to claim 18 characterized in that said pulse generator generates the pulses sequentially or simultaneously.

---

21. (Amended) An apparatus according to claim 18, characterized in that the pulse generating means comprise, for each generated pulse, amplification (48) or attenuation means and in that on the received in side, it comprises, for each pulse, complementary attenuation (50) or amplification means.

*N/E*

---

**IN THE ABSTRACT:**

Please delete the present Abstract of the Disclosure and replace it with the following new Abstract of the Disclosure.